



# UNITED STATES PATENT AND TRADEMARK OFFICE

9

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/531,420

11/01/2005

Jacques Roziere

0512-1273

7925

466 7590 10/15/2007  
YOUNG & THOMPSON  
745 SOUTH 23RD STREET  
2ND FLOOR  
ARLINGTON, VA 22202

EXAMINER
----------

PARVINI, PEGAH

ART UNIT	PAPER NUMBER
----------	--------------

1793

MAIL DATE	DELIVERY MODE
-----------	---------------

10/15/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/531,420	ROZIERE ET AL.	
	Examiner	Art Unit	
	Pegah Parvini	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on October 2, 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 20-65 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-65 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                                  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____   |

### **DETAILED ACTION**

The text of those sections of Title 35 US Code not included in this action can be found in prior Office Action.

#### ***Claim Rejections - 35 USC § 102***

1. The rejection of claims 20-24 under 35 U.S.C. 102(b) as being anticipated by Pinnavaia et al. as generally set forth in the first Office Action mailed on January 24, 2007 stands.

#### ***Claim Rejections - 35 USC § 103***

2. The rejection of claims 25-48 under 35 U.S.C. 103(a) as being unpatentable over Pinnavaia et al. in view of Yadav et al. as generally set forth in the first Office Action mailed on January 24, 2007 stands.
3. Claims 49-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pinnavaia et al. in view of Yadav et al.

Regarding the newly submitted claims 49-65, Pinnavaia et al. disclose a mesoporous silicon-based catalytic system having pores with diameters of about 2 to 10 nm and a process of making such catalyst from a precursor containing at least one compound selected from a group of, for example, tetra- elements, a surfactant, a hydrolyzing agent to form a gelcontaining composition wherein the non-ionic surfactant is in the range of 1-25% by weight (column 3, lines 31-37; column 7, lines 40-67; column 13, lines 50-54; column 10, lines 13-34). The acidity level of the said catalytic

Art Unit: 1793

system is assumed to be inherent because said system is made with through a substantially similar process with the same hydrolysable silica precursor and the surfactant (MPEP 2112). Pinnavaia et al. does not expressly disclose the use of said catalytic system in oligomerization.

Yadav et al., also drawn to mesoporous silicon-based catalysts, disclose the use of said catalytic system for oligomerization of olefins as discussed in the first Office Action (Yadav et al., column 2, lines 37-44, 55-58; column 4, line 60 to column 5, line 11; column 7, lines 33-36; Examples 3-12 and Tables 2-4).

Thus, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made to have added to the invention of Pinnavaia et al. the element of the use of said catalytic system in the conversion of olefins into oligomers (oligomerization) as that taught by Yadav et al. motivated by the fact that Yadav et al. disclose that by doing so the problem of separation of distillation from higher oligomers can be eliminated; also, said catalyst carries reactions with high selectivity/specificity (column 2, lines 58-60; column 3, lines 20-28).

#### ***Response to Amendment***

4. Applicants' amendment to claims 1-19, in pages 2 and 15, filed July 24, 2007 and page 2 filed October 2, 2007 by canceling said claims is acknowledged.

As such the rejections, made under Title 35 USC 112 second paragraph and Title 35 USC 101, to said claims as set forth in the first Office Action are hereby withdrawn.

5. Applicants' amendment to claims 20-47 filed July 24, 2007 and further amendments to claims 20 and 49, filed October 2, 2007 are acknowledged.

However, the amendments are not sufficient to place the application in condition for allowance. Thus, the rejection of said claimed, as set forth in the first Office Action and further above, is proper and stands.

### ***Response to Arguments***

6. Applicant's arguments filed July 24, 2007 have been fully considered but they are not persuasive.

7. Applicants have argued that the catalytic system disclosed by Pinnavaia et al. is a precipitate whereas the one described in the instant invention, specially paragraphs of [0039] in the application publication of the instant application is a gel.

The examiner, respectfully, submits that the feature upon which the applicant relies, catalytic system in the form of a gel, is not recited in the rejected claims. Although the claims are interpreted in the light of the specification, limitations from the specification are not read into the claims. See *In re Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Art Unit: 1793

8. Applicants have argued that Yadav et al. disclose a process of forming pure dimmers whereas the claimed invention claims a process of forming a mixture of compounds by oligomerizing light olefins.

The examiner, respectfully, submits that Yadav et al. clearly disclose producing oligomers from olefins by contacting them with metal oxide catalyst in which comprises zeolite as well (column 4, lines 62-68; column 5, lines 1-12). Furthermore, a monomer is not considered a compound; however, a dimmer may be considered as a compound. In addition, Yadav et al. teach the process of using solid catalysts in reactions such as oligomerization and a process of forming said catalyst.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

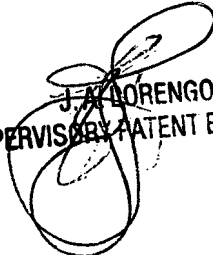
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pegah Parvini whose telephone number is 571-272-2639. The examiner can normally be reached on Monday to Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PP

  
J. A. LORENGO  
SUPERVISORY PATENT EXAMINER